

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 4066380 - PERT/EVOH/PERT Pipe IV 16x2.0 L=480 Pro5
Unit: 1 piece
Manufacturer: Wavin - PL - MPC

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 30-06-2023
End of validity: 30-06-2028
Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - PL - MPC (2021). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												D Reuse- Recovery- Recycling- potential				

Environmental impacts and parameters

GWP-total = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.40E+1	3.10E+0	1.23E+1	9.93E+1	4.72E-1	9.34E+1	2.07E+0	-5.48E+1	1.40E+2
GWP-f	kg CO2 eq	9.05E+1	3.10E+0	1.14E+1	1.05E+2	4.72E-1	8.65E+1	2.08E+0	-5.49E+1	1.39E+2
GWP-b	kg CO2 eq	-6.54E+0	1.16E-3	9.13E-1	-5.62E+0	2.86E-4	6.94E+0	1.57E-3	4.94E-2	1.37E+0
GWP-luluc	kg CO2 eq	4.37E-2	1.24E-3	1.06E-2	5.56E-2	1.67E-4	2.10E-4	3.02E-5	-5.43E-3	5.06E-2
ODP	kg CFC11 eq	2.53E-6	6.76E-7	6.45E-7	3.85E-6	1.09E-7	8.89E-8	4.46E-8	-5.74E-6	-1.64E-6
AP	mol H+ eq	3.35E-1	2.78E-2	1.04E-1	4.67E-1	2.69E-3	1.04E-2	1.07E-3	-4.50E-2	4.36E-1
EP-fw	kg P eq	1.64E-3	2.90E-5	5.89E-4	2.26E-3	3.88E-6	1.06E-5	1.39E-6	-1.14E-4	2.16E-3
EP-m	kg N eq	5.82E-2	8.54E-3	1.16E-2	7.84E-2	9.61E-4	4.68E-3	7.94E-4	-1.44E-2	7.04E-2
EP-T	mol N eq	6.55E-1	9.45E-2	1.35E-1	8.84E-1	1.06E-2	5.32E-2	4.33E-3	-1.60E-1	7.93E-1
POCP	kg NMVOC eq	3.07E-1	2.61E-2	4.55E-2	3.79E-1	3.03E-3	1.42E-2	1.69E-3	-5.29E-2	3.45E-1
ADP-mm	kg Sb eq	1.04E-3	7.17E-5	1.37E-3	2.48E-3	1.22E-5	4.68E-6	1.07E-6	-3.01E-5	2.47E-3
ADP-f	MJ	3.11E+3	4.58E+1	1.02E+2	3.26E+3	7.24E+0	4.90E+0	3.26E+0	-9.16E+2	2.36E+3
WDP	m3 depriv.	7.13E+1	1.54E-1	3.78E+0	7.52E+1	2.22E-2	1.73E-1	1.56E-2	-2.23E+0	7.32E+1
PM	disease inc.	2.87E-6	2.56E-7	6.68E-7	3.79E-6	4.26E-8	8.40E-8	2.24E-8	-2.55E-7	3.69E-6
IR	kBq U-235 eq	2.09E+0	1.93E-1	8.57E-2	2.37E+0	3.16E-2	1.57E-2	1.52E-2	-2.91E-1	2.14E+0
ETP-fw	CTUe	6.10E+2	3.97E+1	8.52E+2	1.50E+3	5.88E+0	2.70E+1	3.00E+0	-1.00E+2	1.44E+3
HTP-c	CTUh	2.88E-8	1.39E-9	4.36E-8	7.37E-8	2.09E-10	1.11E-8	7.99E-11	-6.15E-9	7.90E-8
HTP-nc	CTUh	6.05E-7	4.25E-8	1.10E-6	1.75E-6	7.01E-9	8.52E-8	1.86E-9	-7.12E-8	1.77E-6
SQP	Pt	7.02E+2	3.63E+1	1.59E+2	8.97E+2	6.19E+0	2.20E+0	8.36E+0	-5.20E+2	3.94E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.37E+2	3.08E-2	1.67E+3	1.80E+3	1.04E-1	2.69E-1	1.29E-1	-7.67E+1	1.73E+3
PERM	MJ	0	5.15E-1	0	5.15E-1	0	0	0	0	5.15E-1
PERT	MJ	1.37E+2	5.46E-1	1.67E+3	1.80E+3	1.04E-1	2.69E-1	1.29E-1	-7.67E+1	1.73E+3
PENRE	MJ	3.34E+3	4.99E+0	1.09E+2	3.45E+3	7.69E+0	5.25E+0	3.46E+0	-1.02E+3	2.45E+3
PENRM	MJ	0	4.37E+1	0	4.37E+1	0	0	0	0	4.37E+1
PENRT	MJ	3.34E+3	4.87E+1	1.09E+2	3.50E+3	7.69E+0	5.25E+0	3.46E+0	-1.02E+3	2.50E+3
PET	MJ	3.47E+3	4.92E+1	1.77E+3	5.30E+3	7.79E+0	5.52E+0	3.59E+0	-1.09E+3	4.22E+3
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	1.16E+0	5.25E-3	1.06E-1	1.27E+0	8.19E-4	1.66E-2	4.03E-3	-6.07E-2	1.23E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.79E-4	1.08E-4	1.45E-5	6.02E-4	1.85E-5	2.59E-5	3.92E-6	-1.13E-3	-4.75E-4
NHWD	kg	3.84E+0	2.62E+0	3.07E-1	6.77E+0	4.49E-1	5.39E-1	1.44E+1	-6.11E-1	2.15E+1
RWD	kg	1.89E-3	3.03E-4	2.12E-5	2.22E-3	4.92E-5	1.81E-5	2.13E-5	-3.98E-4	1.91E-3
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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